

# 13

## **Lesson 13 Nesting & Embedding Tables**

### **Lesson Topics**

- ▶ Nesting & Embedding Data in Table Cells
- ▶ Embedding a List in a Table
- ▶ Nesting a Table within a Table
- ▶ Lesson 13 Summary

## Nesting & Embedding Data in Table Cells

Sooner or later, you will find a need to precisely define the layout of data within a single table cell. However, there are no tags or attributes that allow you to do this.

It is possible to create sophisticated page layouts by embedding and nesting data in individual table cells. As you learned in Lesson 11: *Introduction to Tables*, you can embed inline images in table cells. In this Lesson, you will learn two new techniques:

- embedding an ordered or unordered list within a table cell;
- nesting a table within a table cell of another table

### Embedding Lists in Table Cells

You learned how to create ordered and unordered lists in DDC's *HTML 4.0 Fundamentals* course. In this course, you have learned how to create sophisticated tables. The combination of these two features allows you to create richly formatted Web pages.

### Nesting Tables within Tables

It is the hidden capabilities—such as embedding a table of any level of complexity within any cell of another table—that allow you to create truly sophisticated and attractive Web pages with tables.

Figure 13-1 displays an example of multiple tables and lists embedded in a single table.

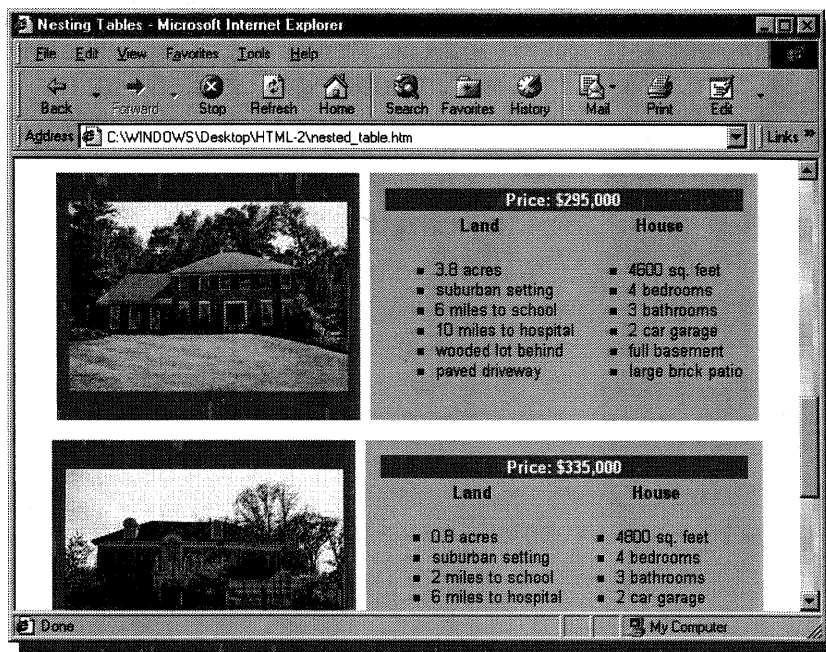


Figure 13-1: Result of nesting and embedding multiple tables and lists

## Embedding a List in a Table

One method of organizing data within a table cell is to embed an ordered or unordered list. You learned about lists in DDC's *HTML 4.0 Fundamentals*. You can embed one or more lists in a single table cell or within multiple table cells.

### Formatting Embedded Lists

You can apply all available list and text formatting techniques to a list that is embedded within a table.

#### Alignment

One of the most common problems regarding embedded lists is alignment or *justification*. If you are centering the contents of a table cell in which you are embedding a list, the list will probably not be formatted in the manner you desire. List items and bullets (or numbers) are typically left justified, at least in relation to one another.

There are two solutions to the problem of list alignment within table cells:

- left align contents of table cell;
- embed the list in an “invisible” table (one with no border) which is, in turn, nested within the primary table.

In an upcoming section of this Lesson, you will gain hands-on experience in changing the justification of an embedded list by embedding it within a table that is nested within another table.

#### Borders

When embedding a list or lists in a table, it is sometimes effective to not add a border to the table (by not adding a `BORDER` attribute to the opening `<TABLE>` tag). Such instances are good opportunities to experiment with or use the `RULES` or `FRAME` attribute you learned about in the previous Lesson.

### Table Nesting Can Solve Problems

As you will see in the next section of this Lesson, you can solve many potential formatting problems associated with embedding a list in a table by simply embedding the list in an “invisible” table that is then nested within the master table that is recognized by a user on the Web page.

### Exercise 13-1: Embedding a List in a Table Cell

In this exercise, you will take one of the tables you created in the last section and embed a list in it. You will then manipulate the list and change the alignment of table cells to improve the appearance of the list.

1. Toggle over to Notepad.
2. Open CELL\_SPANNING3.HTM from the HTML-2 folder.
3. Select **File ► Save As** and name the file TABLE\_LIST.HTM in the HTML-2 folder.
4. Insert the following script that appears in bold:

```
<TR ALIGN=center>
<TD COLSPAN=2 ROWSPAN=2><B>Cell 1-1</B>
<UL TYPE=square>
<LI>turtle
<LI>Corvette
<LI>Rolling Stones
<LI>vacation
<LI>evaporation
<LI>farm
<LI>transistor
</UL>
<TD><B>Cell 1-3</B>
</TR>
```

5. Save the file.
6. Toggle over to your Web browser and load the file TABLE\_LIST.HTM.



The page is downloaded and displayed, as shown in Figure 13-2 on the following page.

Note that the bullet list is center justified because of the `ALIGN=center` attribute in the opening `<TR>` tag.

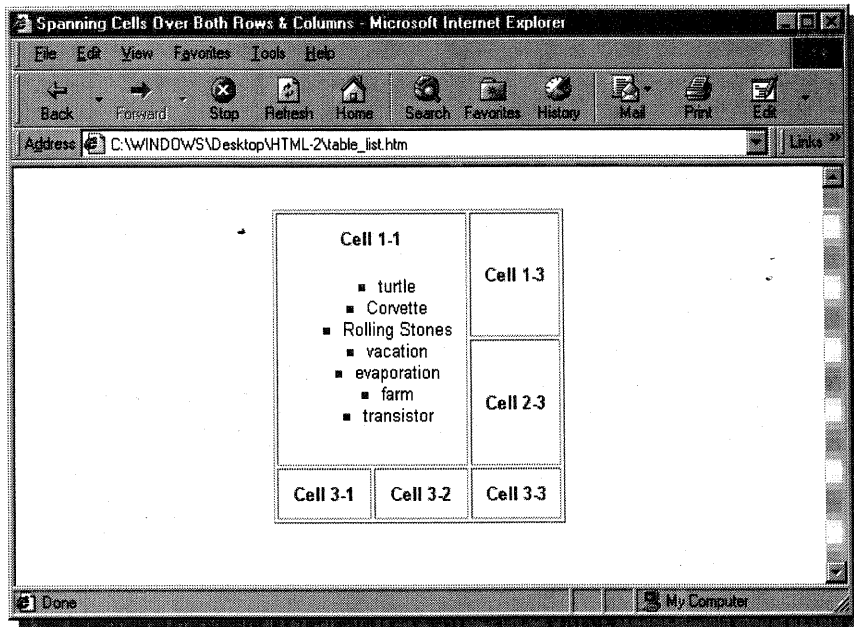


Figure 13-2: Unordered list embedded in a table cell

7. Toggle over to Notepad.
8. Remove or add the following script that appears in bold:

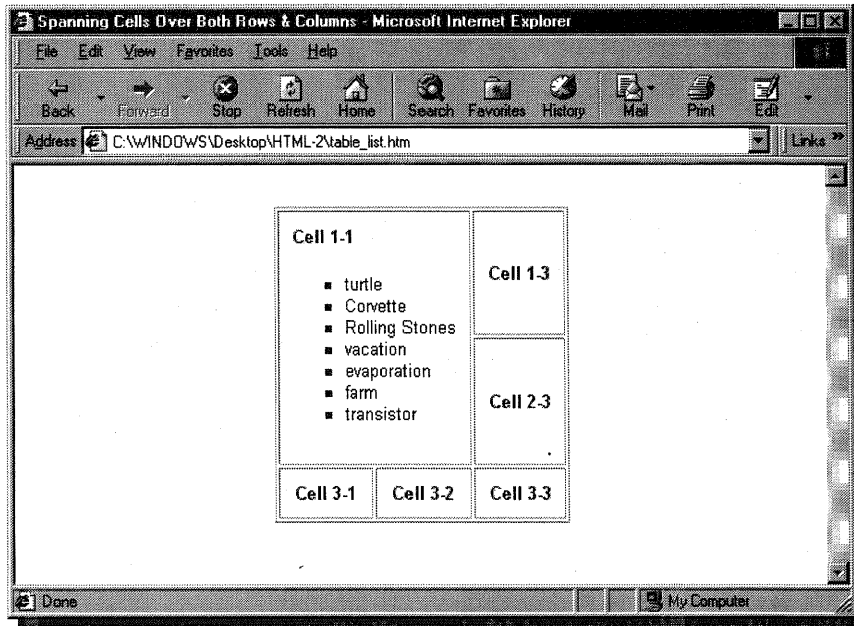
```
<TR ALIGN=center>
<TD COLSPAN=2 ROWSPAN=2><B>Cell 1-1</B>
<UL TYPE=square>
<LI>turtle
<LI>Corvette
<LI>Rolling Stones
<LI>vacation
<LI>evaporation
<LI>farm
<LI>transistor
</UL>
<TD ALIGN=center><B>Cell 1-3</B>
</TR>
```

9. Save the file.
10. Toggle over to your Web browser.
11. Reload the page.



The page is downloaded and displayed, as shown in Figure 13-3.

Note that the bullet list is now left justified because you removed the `ALIGN=center` attribute from the `<TR>` tag. Because you added an `ALIGN` attribute to the `<TD>` tag, you were able to maintain the center justification of Cell 1-3.



**Figure 13-3: List items left justified (default) for clean appearance**

12. Change the list to an ordered list.
13. Change the list back to an unordered list with square bullets.
14. Save the file as `TABLE_NESTING.HTM` in the `HTML-2` folder.

## Nesting a Table within a Table

Although it is not common knowledge, you can nest any type of table within any cell of another table.

When working with nested tables, there are two table references based on the relationship of the tables:

- master table: the table into which another table is nested;
- slave table: table that is nested within the cell of another table.

## Formatting Nested Tables

It is possible to apply rich formatting to nested tables. All types of text and table formatting can be applied to text or tables nested within another table.

### Borders

Sometimes, a master table is not given a border but the nested table (slave table) is. Sometimes, both tables are borderless to give them a more “natural” appearance (you will create a table like this in an upcoming exercise). Often, the table that is embedded is not given a `BORDER`, `RULES`, or `FRAME` attribute so a user does not perceive that it is a table.

### Creating Columns in Cells

Nested tables allow you to present data in multiple columns within a single “cell” of a table. The data is not really in a single cell, but rather in a nested table and in multiple columns (with no border). The viewer of such a table would perceive the data to be arranged within a table cell, unaware of the nested table.

### Browser Support

Table nesting is supported by all major browsers and offers you the opportunity to add an additional level of complexity to the arrangement of data on a page. Both Netscape Navigator/Communicator and Microsoft Internet Explorer have supported tables for several versions.

### Exercise 13-2: Nesting a Table within a Table

In this exercise, you will embed a table within a cell of another table to enhance the format of the master table. You will not add a border, rules, or frames to the slave table, thus keeping it “invisible.” This will create the effect of a complex data layout within the master table.

1. In Notepad, open TABLE\_NESTING.HTM from the HTML-2 folder.
2. Add the following script that appears in bold:

```
<TABLE BORDER CELLPADDING=10 WIDTH=80%>

<TR>
<TD COLSPAN=2 ROWSPAN=2><B>Cell 1-1</B>

<CENTER>
<TABLE>
<TR>
<TD>
<UL TYPE=square>
<LI>turtle
<LI>Corvette
<LI>Rolling Stones
<LI>vacation
<LI>evaporation
<LI>farm
<LI>transistor
</UL>
</TD>
</TR>
</TABLE>
</CENTER>

<TD ALIGN=center><B>Cell 1-3</B>
</TR>
```

3. Save the file.
4. Toggle over to your Web browser.
5. Reload the page.



The Web page now appears with the list centered within Cell 1-1 of the table, as shown in Figure 13-4 on the following page.



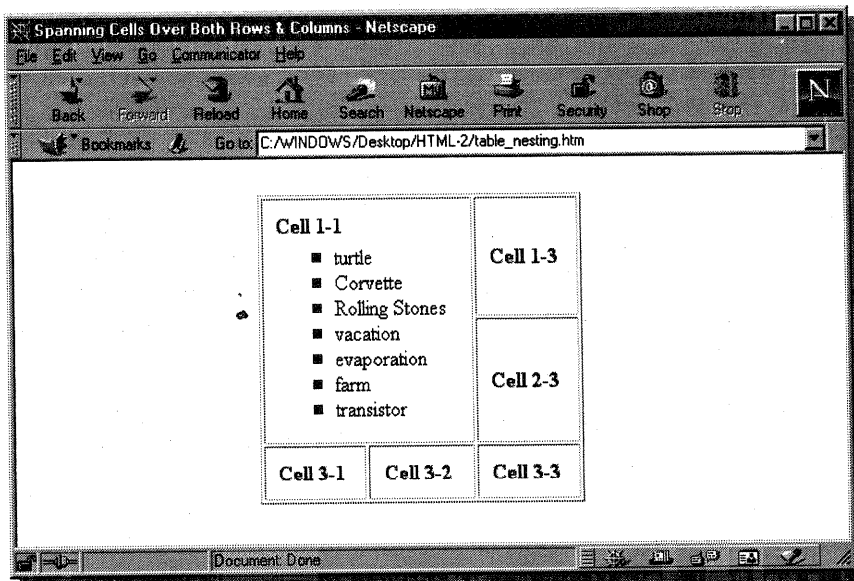


Figure 13-4: List centered within a table cell by nesting a table within a table



Sometimes it is easier to work with nested tables if you temporarily apply a border to the slave table. If you desire the nested slave table to not have a border, remember to remove the `BORDER` attribute from the nested table prior to finishing your scripting or uploading the HTML page to a server.

6. Toggle over to Notepad.
7. Add the `BORDER` attribute with no value to the opening table tag of the slave table.
8. Save the file.
9. Toggle over to your Web browser.
10. Reload the page.



The slave table now appears with a border to help you format and align it within the master table.

11. Reformat and align the slave table as you desire. Toggle over to your Web browser to view the changes you have made.
12. When you are finished, remove the slave table border and view the table in your browser.

### Exercise 13-3: Nesting Multiple Tables and Lists within a Single Table

In this exercise, you will nest six tables within a single table. You will also embed lists, apply cell spanning, apply background colors, and format text.

1. Toggle over to Notepad.
2. Open NESTED\_TABLE.HTM from the HTML-2 folder.
3. Add the following script that appears in bold:

```
<TABLE CELLPADDING=10 CELLSPACING=8>
<TR>
<TD BGCOLOR=gray><IMG SRC=house1.jpg></TD>
<TD BGCOLOR=silver>
<TABLE>
<TR>
<TD COLSPAN=2 BGCOLOR=gray ALIGN=center><B><FONT
COLOR=white>Price: $319,000</FONT></B></TD>
</TR>
<TR>
<TD>
<CENTER><B>Land</B></CENTER>
<UL TYPE=square>
<LI>4.3 acres
<LI>rural setting
<LI>8 miles to school
<LI>12 miles to hospital
<LI>wooded lot behind
<LI>beautiful landscaping
</UL>
</TD>
<TD>
<CENTER><B>House</B></CENTER>
<UL TYPE=square>
<LI>5800 sq. feet
<LI>4 bedrooms
<LI>4 bathrooms
<LI>3 car garage
<LI>full basement
<LI>formal dining room
</UL>
</TD>
</TR>
</TABLE>
</TD>
</TR>
```

4. Save the file.
5. Toggle over to your Web browser and open NESTED\_TABLE.HTM.



The page is downloaded and displayed, as shown in Figure 13-5.

Note the effect of a table nested inside a table. A combination of nesting, background colors, text formatting, embedded lists, and text alignment forms an attractive page that provides information that is easy to read.

6. Scroll to the bottom of the page.

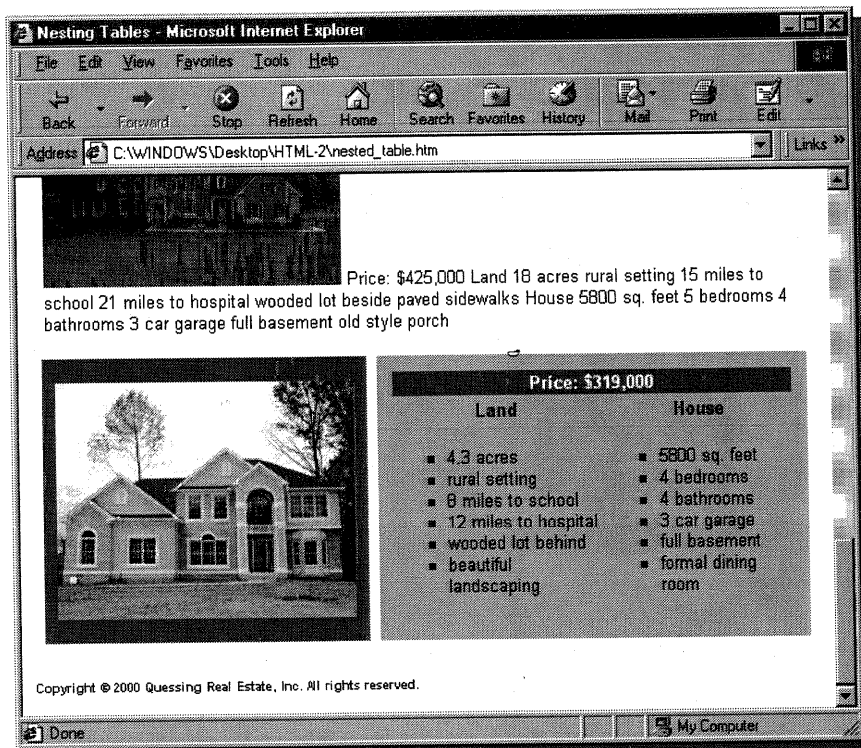


Figure 13-5: Table nested in a table with embedded lists and background colors

7. Toggle back to Notepad.
8. Add the necessary table tags, other HTML tags and attributes to the information for the five remaining homes, nesting the tables as you did in Step 3.
9. Save the file. Toggle over to your Web browser and reload the Web page.



Your page should appear similar Figure 13-6.

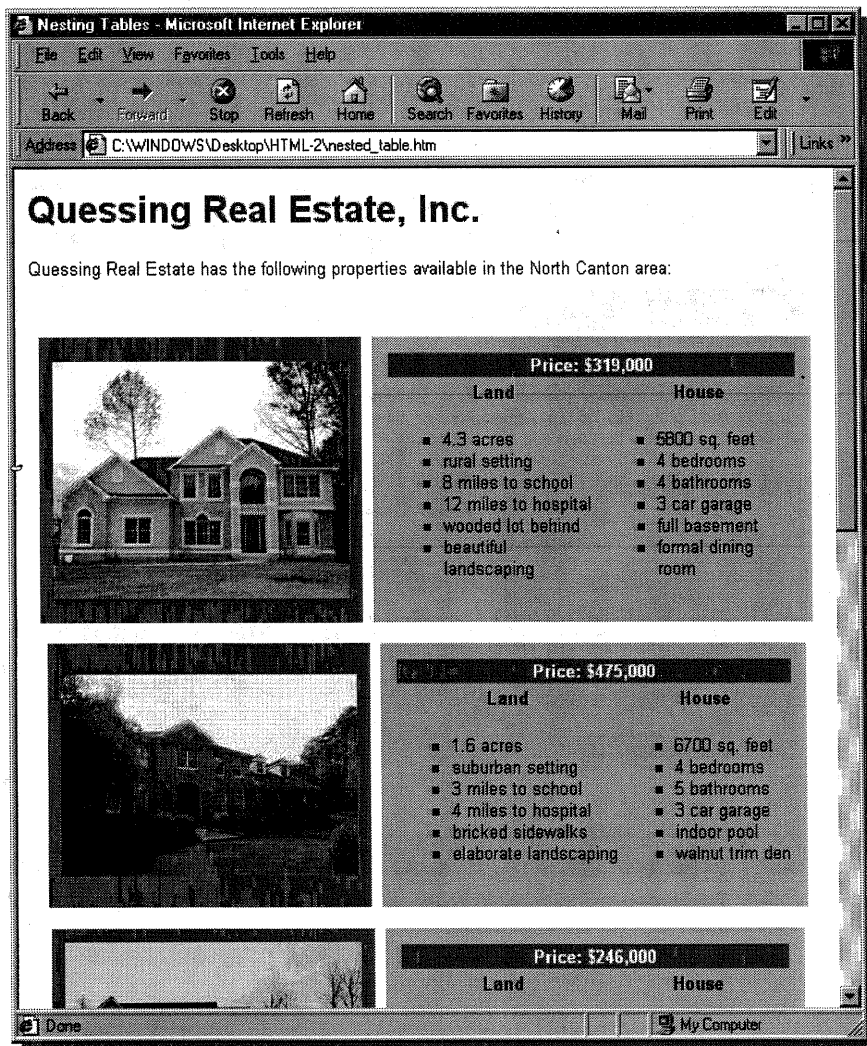


Figure 13-6: Table with six nested tables

## Lesson 13 Summary

- ▶ Two ways to arrange data in a table cell are: 1) embedding an ordered or unordered list and 2) nesting a table. You can combine these features to create richly formatted data, such as embedding a list in a table that is, in turn, nested in another table.
- ▶ A table into which another table is nested is called a *master* table.
- ▶ A table that is nested into another table is called a *slave*.
- ▶ One common problem associated with embedding a list in a table is justification (alignment). You can solve this problem by embedding the list in an “invisible” table (one with no border or gridlines) that is, in turn, nested within another master table. The master table is the one that is visible to the user. The list appears to be embedded directly in the master table.
- ▶ There are two solutions to the problem of list alignment within table cells: 1) left align content of table cells and 2) embed the list in an invisible table which is, in turn, nested within the master table.
- ▶ “Master” and “slave” relational terminology is also used to denote nested framesets with HTML frames (as you learned earlier in this course).
- ▶ Sometimes, a master table is not given a border but the nested (slave table) is. Sometimes, both tables are borderless to give them a more “natural” appearance.
- ▶ Often, the table that is embedded is not given a BORDER, RULES, or FRAME attribute so a user does not perceive that it is a table.